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ABSTRACT

A study examined the effectiveness of a collaborative learning model for the teaching of a modern English grammar class at the college level. The model involved student presentations based on the explanation of material from assigned readings in the texts; daily quizzes on the material from the assigned reading; and peer grading of the daily quizzes and exams with the instructor spot checking for accuracy of grading. Student attitudinal surveys revealed a slightly negative perception of students on the whole toward the conduct of the class as measured during the spring of 1989 but a positive perception as measured during the summer of 1988. However, the positive perceptions that students have of their own involvement in the educational process counterbalance the negative perceptions. Perhaps an even greater positive aspect of the collaborative learning model is the discipline that it introduced into the educational process, resulting in a more adequate mastery of the subject matter and manifesting itself in better classroom attendance. (Ten tables of data and one figure are included; an appendix containing the Attitudinal Survey and 35 references are attached.) (KEH)

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Teaching English Grammar Using

Collaborative Learning in University Courses

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Abstract

On the basis of a model established for the teaching of Freshman English, a collaborative learning model was used for the teaching of a modern English grammar class. This model involved 1. Student presentations based on the explanation of material from assigned readings in the text(s). 2. Daily quizzes of the material from the assigned reading. 3. Peer grading of the daily quizzes and exams with the instructor spot checking for accuracy of grading. Student attitudinal surveys revealed a slightly negative perception of students on the whole toward the conduct of the class as measured during the spring but a positive perception as measured during the summer. Nevertheless, positive perceptions that students have of their own involvement in the educational process counterbalance the negative perceptions. Perhaps an even greater positive aspect of the collaborative learning model used here is the discipline that it introduced into the educational process resulting in a more adequate mastery of the subject matter and manifesting itself in better classroom attendance. Future classes and attempts to sample other aspects of the educational

process involved in collaborative learning will, no doubt, throw more light on the nature of student-teacher interaction and the reasons for the findings in this study.

Background

The model for collaborative learning used in an English grammar class was first developed in 1979 to alleviate the problems of grading compositions in a freshman English class during a five week summer school. Such a course required the grading of 60 or more themes per week. As a result, peer grading and a system requiring the students to run the class were utilized. The satisfactory nature of the experience was reported in the Arizona English Bulletin a year later. That such a system could be used for the teaching of English linguistics was not certain, however, since teaching freshman English centers on the development of a skill and it is in skill development classes that collaborative (or cooperative) learning has been used so effectively.

Review of Literature

A review of the literature reveals that collaborative learning is used most frequently in skill-based classes. For example, D. J. Magin (1982) trained a group of university students in

decision making using collaborative learning. Hester (1984) used collaborative learning to teach English as a second language, again focusing on the acquisition of a skill as did Bassano and Christison (1988) and Bejerano (1987). Collaborative learning or peer teaching is used in language acquisition in a bilingual class by Chesterfield and Chesterfield (1985), Heller and Barker (1988), and by Perez (1979), in the acquisition of language communication skills by Celani (1979), in the acquisition of dialogue skills in the foreign language class (Manthey 1987), in teaching survival skills to retarded children (Snell 1979) and in imparting teaching skills to English as a second language teachers (Plaister 1977). Similarly, peer teaching has been used in the teaching of reading skills (Larson and others 1984, Mocker 1975) and in the impartation of orthographic skills (Lambiotte and others 1988). Cooperative learning has even been used for building a positive attitude in the foreign language classroom (Gunderson and Johnson 1980) as well as in developing foreign language skills with college students (Ulrich 1982) and with children (Cooper and others 1982). Peer teaching or collaborative learning has been used to enhance the student's capacity for self-direction and intellectual responsibility (Welds 1986). The same kind of teaching / learning has been used to develop courtroom skills of expert witnesses and lawyers (McCreary 1977).

As the above survey would indicate, peer teaching and collaborative (or cooperative) learning occur most frequently in skill based classes. They do not occur so frequently in classes dealing with the impartation (or acquisition) of knowledge. In fact, one report dealing with conveying knowledge from teacher to student does so under the title of 'lecture' with a subheading for collaborative learning (Oddi 1983). They do occur, however, in the area of knowledge acquisition under the general heading of peer tutoring. As such, one of the proponents boasts that peer tutoring is used in "... increasingly esoteric subject areas" (Topping, 1988:5) and starts the list with foreign language teaching and follows it with the teaching of writing and reading (1988:19). Besides this, Wagner (1982:231) reports on a project in which "... arithmetic skills ..." were effectively conveyed through peer teaching. Again, all of the latter are skill based areas.

The Setting

Nevertheless, in the fall of 1986 matters had come to an impasse in the modern English grammar that I had taught for more than quarter of a century. Attendance was bad -- almost 50% of the students were staying away on any given class hour -- discipline was even worse, and the material was not being mastered

by all but the very best students. Student evaluations of the instructor were low, 2.1, on a scale with 1.0 as high and 10 as low against a departmental average of 1.9.

In the fall of 1987, the grammar class was conducted on the basis of the model of the experiment with freshman English. This class was taught in a similar fashion in the summer of 1988 and the spring of 1989. Records on different aspects of the collaborative learning experience were kept for each of the three classes. Most of the substance of this report deals with the class in the spring of 1989.

The Collaborative Class

On the first day of class, students were given the following instructions with the outline of the course.

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Requirements of the course: (1) Complete two quizzes per week over material in the readings and from the lectures, (2) do peer evaluation of the answers on the quizzes of classmates, (3) give presentations on readings for the course from the readings available from Kinkos on Forest Avenue in Tempe and from the text: Noel Burton-Roberts, Analysing Sentences: An Introduction to English Syntax (London and New York: Longman, 1986), (4) complete a mid

term and final exam, (5) complete various sentence diagramming exercises and (6) help to form a committee for the appeal of all grades. All quizzes will be scored on a five-point scale; there will be no make-ups. Five points will be awarded for oral reports. The exams will be graded on a twenty point scale. The instructor will grade the quizzes of 1/4 of the students in the class on the same point scale and will award grades to the grading of peers, maximum 5 points. All quizzes and tests and grading exercises are closed book; students must answer and grade quizzes or tests on the basis of their knowledge of the subject -- **NOT** on the basis of their ability to find answers in a book or notes. Each member of the class will be required to fill out a weekly attitudinal survey; for each attitudinal survey the student will be awarded 2 points. No surveys will be accepted on dates other than the due date. The final grade in the course will be awarded on the basis of the grades on each quiz, the grading of the quizzes, the oral reports, weekly attitudinal surveys and the grades for the exams. In the event of absence, the first two absences will be scored as 4.2; all absences thereafter will be scored as 1.1.

The Conduct of the Class

Thus, the course included the following features:

1. Student presentations based on the explanation of material from assigned readings in the text(s).

2. Daily quizzes of the material from the assigned reading.

3. Peer grading of the daily quizzes with instructor grading 25% to 30% of the quizzes, assigning grades to those quizzes and grading the accuracy of the peer evaluations.

During the first of these (1) the instructor sat at the back of the lecture room taking note of the student presentation which explained text material to peers. In preparation for writing two quiz questions on the blackboard requiring essay answers, the instructor noted the student-lecturer's emphasis on material from the reading. Students were given study questions for the mid-term and final from the first day of class so that student-lecturers could use these in determining the focus for the individual class.

Grading of Quizzes and Tests

For the third of these (3 above), students and teacher alike awarded 5 points to papers which had no serious flaws. Errors reduced the total grade by .10 or more. Generally, the scores fell between 4 and 5 for both the student graders and the instructor. As a result of this, student and teacher grades did not significantly differ over any given grading period or for the midterm and the midterm and final. (See Tables 1 , 2 and 3.)

Table 1: Correlation of Student and Teacher Grading on Quizzes

Week #1 Quiz #1			Week #1 Quiz #2		
Correlations	SGRADE	TGRADE	Correlations	SGRADE	TGRADE
SGRADE	1.0000	.1939	SGRADE	1.0000	.9682***
TGRADE	.1939	1.0000	TGRADE	.9682***	1.0000
Minimum pairwise N of cases 10			Minimum pairwise N of cases 10		
Week 2, Quiz #3			**Week 2, Quiz #4**		
Correlations	SGRADE	TGRADE	Correlations	SGRADE	TGRADE
SGRADE	1.0000	.9094***	SGRADE	1.0000	.7575**
TGRADE	.9094***	1.0000	TGRADE	.7575**	1.0000
Minimum pairwise N of cases 9			Minimum pairwise N of cases 9		
Week 3, Quiz #5			**Week 3, Quiz #6**		
Correlations	SGRADE	TGRADE	Correlations	SGRADE	TGRADE
SGRADE	1.0000	.6406	SGRADE	1.0000	.8686*
TGRADE	.6406	1.0000	TGRADE	.8686*	1.0000
Minimum pairwise N of cases 5			Minimum pairwise N of cases 5		
Week 4, Quiz #7			**Week 4, Quiz #8**		
Correlations	SGRADE	TGRADE	Correlations	SGRADE	TGRADE
SGRADE	1.0000	.0704	SGRADE	1.0000	.7990*
TGRADE	.0704	1.0000	TGRADE	.7990*	1.0000
Minimum pairwise N of cases 6			Minimum pairwise N of cases 8		
Week 5, Quiz #9					
Correlations	SGRADE	TGRADE			
SGRADE	1.0000	.8663*	One-tailed Significance		
TGRADE	.8663*	1.0000	* - .05; ** - .01;		
			*** - .001		
Minimum pairwise N of cases 5					

SGRADE = Student Grade of Quiz; TGRADE= Teacher Grade of Quiz

Table 2: Concordance of Mid-term and Final Exam Grades of Teacher and Students - Spring 1989 Kendall W - Coefficent of Concordance.

	N	Mean	Std Dev	Minimum	Maximum
SGRAD	50	17.876	2.228	10	20
TGRAD	50	16.498	2.976	6	20

Mean Rank	Variable	
1.69	SGRAD	Student Grades on Mid Term & Final E314
1.31	TGRAD	Teacher Grades on Mid Term & Final E314

Cases	W	Chi-Square	D.F.	Significance
50	.1604	8.0222	1	.0046**

One-tailed Significance * - .05; ** - .01; *** - .001

Table 3: Concordance of Student and Teacher Grades on Mid-term and Final Exam Using Kendall W - Coefficient of Concordance

SGRAD - Student Grades on Mid-term Summer E314 1989
TGRAD - Teacher Grades on Mid-term Summer E314 1989

	N	Mean	Std Dev	Minimum	Maximum
SGRAD	26	17.110	3.251	6	20
TGRAD	26	14.587	4.020	5	20

Mean Rank	Variable	
1.77	SGRAD	Student Grades on Mid term E314 1989
1.23	TGRAD	Teacher Grades on Midterm E314 1989

Cases	W	Chi-Square	D.F.	Significance
26	.3427	8.9091	1	.0028**

SGRAD - Student Grades on Final Summer E314 1989
TGRAD - Teacher Grades on Final Summer E314 1989

	N	Mean	Std Dev	Minimum	Maximum
SGRAD	23	17.639	2.516	10	20
TGRAD	23	14.983	3.874	7	20

Kendall Coefficient of Concordance

Mean Rank	Variable	
1.89	SGRAD	Student Grades on Final Summer E314 1989
1.11	TGRAD	Teacher Grades on Final Summer E314 1989

Cases	W	Chi-Square	D.F.	Significance
23	.7043	16.2000	1	.0001***

One-tailed Significance * - .05; ** - .01; *** - .001

Not only did the instructor grade the paper of approximately 1/4 of the students on each quiz, but also graded the grading of the students on the 25% papers graded. Over the semester, the students graded 578 quizzes; the instructor graded 179 or 30% of the quizzes, 5% more than the targeted 25%.

Reporting of Grades

All comments were recorded on 4 x 6 notepad paper so that the graders could view the comments of the instructor on the grading after each student-author (the gradee) had examined the grading and the comments. As a result of this and the discussion above, it should be apparent from the foregoing that record keep-

ing became a major task in this type of teaching. To expedite this task, a computer program was written in Quick Basic that not only stored the grades but also adjusted the total score on the basis of each student's average and provided all the students with a weekly average of their scores. Thus, the students' records might look like the following: (See Table 4).

Table 4: Student scores on daily quizzes

Name	Student Grade	Grading	Teacher Grade	Credit
January 25, 1989 Activity #1				
Baker, James	4	0	0	2
Carleton, Ray	4.85	5	0	2
Daniels, Susan	5	5	0	2
Edgewater, Teri	4.2	4.6	4.4	7
Foxglove, Luke	5	0	0	0
Geldwesser, Barry	4.5	0	0	2

The computer output for each quiz and each student was as follows: (See Table 5)

Table 5: Daily quiz report for students

GELDWESSER

SG = Student Grade, G = Grading TG = Teacher Grade, X= Other

	SG	GR	TG	X	Total	Adj. Total*
10 - 03-03-1989	5	0	3.5	7	114.9	218

Your adjustment is based on 12 scores out of 36 scores at 3.

*Adjusted Total

To arrive at the Adjusted Total, the computer, in effect, took every '0' in the record and wrote in the student's average to compensate for the fact that not every student had the same number of grades. (In the program '0' does not equal the arithmetic 'zero;' it is read as 'no score.') Thus, students received an daily (or weekly) progress report in the form of the computer printout in Table 3 above.

The Curriculum

The curriculum for the class was based on a historical and a multi-disciplinary approach to the subject matter from a number of different sources. For example, the introductory transformational text by Burton-Roberts (1986) and a collection of readings developed through the professor publishing program of the local Kinko's copy service. Some of the chapters in the Kinko's package were developed by the instructor (hereafter referred to as the 'Typescript'); others were duplicated from out-of-print or hard to obtain sources. In these sources resided a multi-viewpointed curriculum dealing with different grammars. For instance, the first three weeks of class dealt with the first chapter from Burton-Roberts (1986), a contemporary transformational linguist writing on sentence (constituent) structure plus the first four chapters of the Typescript dealing with Reed and Kellogg diagramming, school grammars and traditional grammars and a two chapter

survey of structural grammars (Hernandon 1954) together with a survey of Reed and Kellogg diagrams and school grammars by Gleason (1965). The second three weeks dealt with the development of a knowledge of English grammar from the viewpoint of an early, pre-Aspects model of transformational grammar together with a brief view of stratificational grammar. The third three weeks dealt with grammar for the viewpoint of the Aspects - model (Chomsky 1965). The last part of the semester focused on the Burton-Roberts text giving the students a view into more recent transformational work including a view of some government and binding theory of transformational generative grammar.

This kind of a curriculum not only gives the students a multi-viewpointed approach to the study of grammar, but it also provides a loosely constructed spiral curriculum. For instance, the notion of constituents is first developed in the first chapter of the Burton-Roberts text it is then picked up by the Hernandon portion on structural grammars and reinforced in the Gleason discussion. Similarly, the notion of double object verbs is discussed in the typescript with reference to the early transformational grammars and found again in Burton-Roberts in the double-object, ditransitive, verbs. Similar observations can be made about any number of grammatical concepts or categories. It is felt that the early transformational grammars did a good job on synthesizing material from earlier eras, including many of the works from the scholarly traditional grammarians such as Jespersen. Students in this particular class thus not only were intro-

duced to grammar from a historical and a multi-disciplinary approach but they also covered a great deal of material. Other sections of the same class at Arizona State University dealt only with the Burton-Roberts text and material in concert with it.

The Results

Mastery of Subject Matter

Not only did the students in this section cover the subject from a broadening point of view but they also covered it well. If an arbitrary point such a score of 18 on the midterm and final of the student grades is set for mastery of 80% of the material in the class then 15.5 students or 60% of the class attained this level of mastery. Similarly, since the instructor's grading scale was somewhat lower than the students' (See Table 3: Student Mean = 17.876; Teacher mean = 16.498), the score should be set at 17 on the teacher's grades yielding 14.5 students or 51% of the class. Similarly, if the 80% mastery level is set at 4.8 out of 5 points on the daily quizzes as they were graded by students, then 67% of the students reached this level on a daily basis; if the 80% criterion level is set at 4.7 for the teacher graded daily quizzes on the basis of the fact that the teacher mean grade (4.502) is lower than the student mean grade (4.688) then 51% of the students reached this level of accomplishment on a daily

basis. Thus, from the instructor's point of view, no students failed the midterm; only two students failed the final with scores of 6 and 7. No students failed the class.

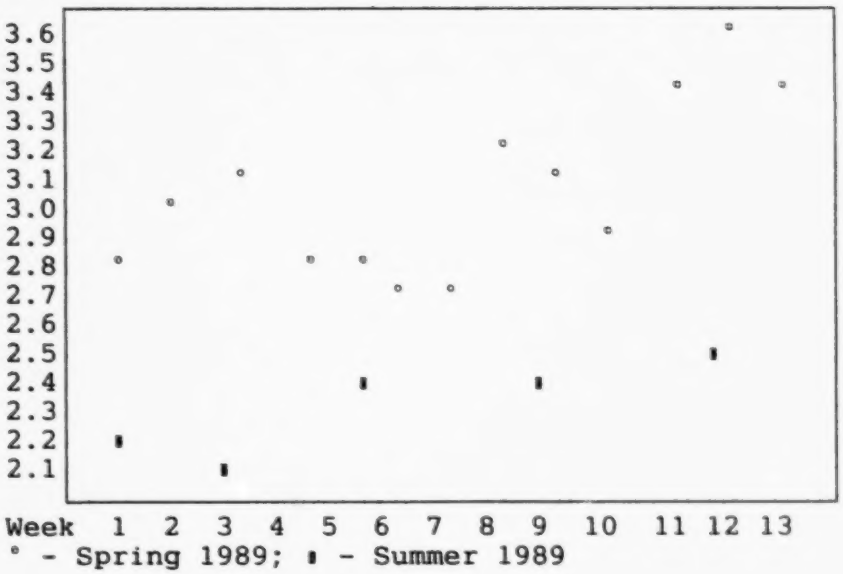
Attendance

Similarly, the absentee rate in the class was negligible. In the total number of student class sessions (2 sessions per week over 15 weeks x 26 students = 780), only 33 absences were recorded which is less than half of one percent of the total. Fully one half of the class hours recorded no absences at all. Previous classes taught by the lecture method recorded up to a 50% absentee rate. However, at the beginning of the class there were 40 enrollees; 12 dropped after the first week. For this class, such a record is not unusual. In 1969, a modern grammar class under this instructor started out with 30 students; only 16 wrote the final exam. Part of the problem can be attributed to the fact that many students who enroll in a modern grammar class do so in hopes of improving their writing; when they are disabused of this idea, they drop out of the class. Nevertheless, from the point of view of the mastery of the subject matter and from the attendance record of the students the class was judged a success.

Student Attitudes

For this study, the attitudinal surveys used a conventional scale based on the Osgood, Suci and Tannebaum semantic differential as modified by Lodahl and Kejner to elicit student attitude towards the grammar class. The response categories were scored from '1' (strongly agree) to '5' (strongly disagree) as in the study by Knoop (1980) and subjected to various kinds of statistical analysis such as reliability tests, correlations and other measures of similarity (or difference). From this analysis of the weekly attitudinal surveys an interesting trend became apparent. (See Appendix I for a copy of the survey.) At first, students were on the whole in favor of the structure of the class but their attitudes turned slightly negative from the first week to the third week as evidenced by the mean scores on the attitudinal survey in the spring of 1989. From that point, their attitudes towards differing facets of the class improved for a few weeks up to the midterm exam and became negative toward the end of the semester. For the summer class, this was never true. The student attitudes were positive, moving slightly towards the negative end of the scale, but still staying positive throughout the term. (See Figure 1.)

Figure 1: Attitudinal Survey: Mean score



Some questions might be raised as to the reason for this. There are two possible reasons: (1) The attitudinal study for the summer class included an item on daily grading. This, however, did not account for much of the negative pull on the scale; without this item the mean score was still towards the positive end of the scale (2.26 versus 2.34 overall) for the summer school students. (2) The spring semester class had one student who opposed the general organization of the class and voiced his complaints vociferously. It is thought that his opinions influenced the entire class.

Besides this, it is interesting to note that those items which were the most positively viewed (I, E and C) dealt with activities which required the most student involvement (grading

quizzes (C and E) and writing the daily quizzes (I) with means from 2.5 to 2.7 (2.12 to 2.38 in the summer). (See Table 6.) During the summer, the most positively viewed aspect of the class was the daily reports of grades (Item H - mean 1.7). The least liked features of the

Table 6: Means and Standard Deviations of Averge Scores on Attitudinal Survey for ENG 314 - Spring (A) and Summer (B) of 1989

Variable	Cases	Mean-A	Std Dev	Cases	Mean-B	Std Dev
ITEMA	13	2.8846	.4160	5	2.2400	.1949
ITEMB	13	3.0846	.2512	5	2.4800	.2683
ITEMC	13	2.5000	.2769	5	2.1200	.2387
ITEMD	13	3.2000	.2769	5	3.0600	.3209
ITEME	13	2.7462	.2847	5	2.3800	.1643
ITEMF	13	2.8231	.3700	5	2.5400	.2510
ITEMG	13	3.0231	.3166	5	2.2600	.2966
ITEMH	13	3.3077	.3252	5	1.7200	.0837
ITEMI	13	2.5769	.3700	5	2.1600	.1949

class dealt with the instructor's intervention in the process items (B, G and H) with means from 3.1 to 3.3 (2.26 and 2.48 in the summer). Only one other item shows this negative a perception, item D, which was highly negative both in the spring and the summer and this item was significantly different from all others on Friedman ANOVA in the summer and significantly different from most others in the spring. (Tables 8, 9) It reflects largely the frustration of literary students dealing with linguistic matters, a frustration which peaks towards the mid-

term exam in both the spring and the summer classes. (See Table 6.) A correlation analysis (Table 7) reveals that item C correlates significantly with both item E

Table 7: Correlation of Items A through I of Attitudinal Survey over a Thirteen Week Period

	ITEMA	ITEMB	ITEMC	ITEMD	ITEME	ITEMF
ITEMA	1.0000	.0693	.0868	.3834	.2669	.2894
ITEMB	.0693	1.0000	.6591	.5872	.3954	.6318
ITEMC	.0868	.6591	1.0000	.4891	.7824*	.5937
ITEMD	.3834	.5872	.4891	1.0000	.7084*	.5205
ITEME	.2669	.3954	.7824*	.7084*	1.0000	.5191
ITEMF	.2894	.6318	.5937	.5205	.5191	1.0000
ITEMG	.1105	.4974	.7034*	.6273	.6437	.2440
ITEMH	.3951	.4097	.3146	.7311*	.4549	.4624
ITEMI	.3277	.7670*	.7483*	.4636	.6043	.7102*

	ITEMG	ITEMH	ITEMI	
ITEMA	.1105	.3951	.3277	Minimum pairwise
ITEMB	.4974	.4097	.7670*	N of case: 13
ITEMC	.7034*	.3146	.7483*	
ITEMD	.6273	.7311*	.4636	2-tailed Signif:
ITEME	.6437	.4549	.6043	*=.01 **=.001
ITEMF	.2440	.4624	.7102*	
ITEMG	1.0000	.5484	.3108	
ITEMH	.5484	1.0000	.2924	
ITEMI	.3108	.2924	1.0000	

Table 8: Friedman ANOVA: Attitudinal Survey English 314 Spring 1989

	ITEMB	ITEMC	ITEMD	ITEME	ITEMF	ITEMG	ITEMH	ITEMI	ITEMM
ITEMA	.052*	.052*	.012**	.579	.781	.165	.012**	.096	.405
ITEMB		.000***	.096	.012**	.005**	.781	.096	.000***	.579
ITEMC			.000***	.002**	.012**	.000***	.000***	.579	.000***
ITEMD				.000***	.005**	.096	.267	.002**	.165
ITEME					.998	.026*	.000***	.165	000***
ITEMF						.096	.000***	.052*	.096
ITEMG							.096	.002**	.405
ITEMH								.000***	.096
ITEMI									.002**

Table 9: Friedman ANOVA: Attitudinal Survey ENG 314 Summer 1989

	ITEMB	ITEMC	ITEMD	ITEME	ITEMF	ITEMG	ITEMH	ITEMI	ITEMM
ITEMA	.025*	.179	.025*	.179	.073	.993	.025*	.371	.073
ITEMB		.073	.025	.993	.371	.371	.025*	.025*	.073
ITEMC			.025	.073	.025*	.073	.073	.654	.073
ITEMD				.025*	.025*	.025*	.025*	.025*	.025*
ITEME					.371	.993	.025*	.025*	.179
ITEMF						.179	.025*	.025*	.179
ITEMG							.025*	.179	.654
ITEMH								.025*	.025*
ITEMI									.073*

and item I indicating that students tended to mark these items in a similar fashion from one week to the next. The same is not true for B, G and H. Thus it should be apparent from the above that there are three factors involved in the student marking of the attitudinal survey: (1) student involvement which receives the most positive rating (Items E, C and I), (2) instructor involvement which receives the most negative rating (Items B, G, and H (for the spring class) with the anomalous item D, and (3) an unidentifiable residue, items F and A. This impression is confirmed with a factor analysis. (See Table 8.)

Table 10: Factor Analysis of Items on Attitudinal Survey

Analysis Number 1 Listwise deletion of cases with missing values
Extraction 1 for Analysis 1, Principal-Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
ITEMB	1.00000	*	1	4.99361	55.5	55.5
ITEMC	1.00000	*	2	1.24493	13.8	69.3
ITEMF	1.00000	*	3	1.07486	11.9	81.3
ITEMD	1.00000	*	4	.69276	7.7	89.0
ITEME	1.00000	*	5	.43425	4.8	93.8
ITEMG	1.00000	*	6	.29834	3.3	97.1
ITEMH	1.00000	*	7	.18608	2.1	99.2
ITEMI	1.00000	*	8	.04757	.5	99.7
ITEMA	1.00000	*	9	.02761	.3	100.0

PC Extracted 3 factors.

Thus, the most important finding from the attitudinal surveys centers on the fact that students prefer the student-centered activities to instructor-centered activities and that they like to receive daily (or weekly) grade reports.

Conclusion

Perhaps one slightly discouraging aspect of this particular attempt to use the collaborative learning model for the 'teaching' of modern English grammar is the slightly negative perception of students on the whole of the conduct of the class as measured on attitudinal surveys in the spring. This, however, may have been a function of that particular class membership since the same methodology used with a summer class produced positive perceptions of the class. Besides this, the positive perceptions that students have of their involvement in the educational process, however, is a counterbalance to that and an important finding in this study. Perhaps an even greater positive aspect of the collaborative learning model used here is the discipline that it introduced into the educational process resulting in a more adequate mastery of the subject matter and manifesting itself in better classroom attendance. Future classes and attempts to sample other aspects of the educational process involved in collaborative learning will, no doubt, throw more light on the nature of student-teacher interaction and the reasons for the findings in this study.

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Appendix I: Attitudinal Survey

JWNey Attitudinal Survey: English 314 Assignment date: 2/21/89

Respond to each of the statements by checking the item that you feel is right and by circling the number in front of it.

A. The subject matter of this course is presented in an interesting and challenging manner.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

B. The conduct of the class is helpful; it helps me in the mastery of the subject matter.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

C. Grading the weekly quizzes gives me an appreciation of the work that other students are doing.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

D. My level of frustration is low; I find the conduct of the class satisfying and of interest in itself.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

E. It is a good experience for me to grade the weekly quizzes of other students; it helps me master the subject matter.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

F. It helps me a lot to have another student going over the material in the assigned reading.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

G. The instructor's participation in the class keeps the class running smoothly and insures maximum student involvement.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

H. I like the way that the instructor is running the ENG 314 class this spring.
(H. I like to receive daily reports of my standing in the ENG 314 Modern Grammar class this summer. Alternate item for summer of 1989.)

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.

I. Studying for the exams and the daily quizzes helps me to write better answers to questions on grammar.

__1. I strongly agree. __2. I agree.
__3. I have no opinion on the matter.
__4. I disagree. __5. I strongly disagree.